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Remarks

Claims 1-9, 11, 12, 23-31, 33-43, 45 and 46 stand rejection under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,491,801 to Jain et al. and U.S. Patent No. 6,820,128 to Firoiu et al.; claims 3, 4, 9, 25, 26, 31, 37, 38 and 43 stand rejected under 35 U.S.C. § 103 as being unpatentable over the '801 and '128 patents and U.S. Patent No. 6,646,987 to Qaddoura; claims 10, 32 and 44 stand rejected under 35 U.S.C. § 103 as being unpatentable over the '801 and '128 patents and U.S. Patent No. 4,771,391 to Blasbalg; and claims 13-22 stand rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,205,120 to Packer et al. in view of the '801 and '128 patents.

With this paper, claim 1 has been as amended as follows:

A method in a data processing system for managing traffic in a network data processing system, the method comprising:
 monitoring the traffic for a plurality of ~~network paths~~ TCP connections or UDP associations through a given network path; and
 responsive to a packet for a particular ~~network path~~ TCP connection or UDP association within the plurality of ~~network paths~~ TCP connections or UDP associations causing the traffic for the particular network path to exceed a level of traffic allowed, reducing an amount of bandwidth available to one of the particular-network-path TCP connection or UDP association and another TCP connection or UDP association using an action based on a transmission protocol used by corresponding to the particular-network-path one TCP connection or UDP association, ~~wherein the action used varies for different transmission protocols.~~

Similar amendments have been made to claims 13, 23 and 35. Support for these amendments can be found in paragraphs 27-30 of US 2002/0141341 A1. No new matter is involved.

With this paper, claims 3 and 4 have been amended as follows:

The method of claim 1, wherein when the one TCP connection or UDP association comprises a TCP connection the action comprises:
 reducing a congestion window size by multiplying the amount of bandwidth available by a dynamic variable that is adjusted using changing requirements of the ~~particular~~ network path to reduce the

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amount of bandwidth available based on a fair share for the particular network-path one TCP connection.

The method of claim 3, wherein the congestion window size is reduced as follows:

$$CW = \max(\text{MinW}, \min(CW * F, \text{MaxW}))$$

wherein CW is the congestion window size, MinW is a minimum congestion window size for the particular network-path one TCP connection, MaxW is a maximum congestion window size for the particular network-path one TCP connection, and F is the dynamic variable used to adjust the congestion window size for the particular network-path.

Similar amendments have been made to claims 9, 25, 26, 31, 37, 38, and 43. Support for these amendments can be found in paragraph 34 of US 2002/0141341 A1. No new matter is involved.

Claim 7, as amended, now recites:

A method in a data processing system for managing traffic in a network data processing system, the method comprising:

monitoring ~~aggregate~~ traffic for each of a plurality of ~~network-paths~~ TCP connections or UDP associations through a network path; and
responsive to the ~~aggregate~~ traffic for a selected ~~network-path~~ TCP connection or UDP association exceeding a threshold, reducing the ~~aggregate~~ traffic for the selected ~~network-path~~ TCP connection or UDP association using an action based on a transmission protocol used by corresponding to the selected TCP connection or UDP association network-path, wherein the action varies for different transmission protocols.

Similar amendments have been made to claims 18, 29 and 41. Support for these amendments can be found in paragraphs 27-30 of US 2002/0141341 A1. No new matter is involved.

As noted above, claims 1-9, 11, 12, 23-31, 33-43, 45 and 46 stand rejection under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,491,801 to Jain et al. and U.S. Patent No. 6,820,128 to Firoiu et al.; claims 3, 4, 9, 25, 26, 31, 37, 38 and 43 stand rejected under 35 U.S.C. § 103 as being unpatentable over the '801 and '128 patents and U.S. Patent No. 6,646,987

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to Qaddoura; and claims 10, 32 and 44 stand rejected under 35 U.S.C. § 103 as being unpatentable over the '801 and '128 patents and U.S. Patent No. 4,771,391 to Blasbalg. Jain et al. disclose in column 4, lines 52-62:

a router determines the existence of an overload condition by detecting when it is operating beyond an estimated capacity level, it calculates a fair share of the estimated capacity level for each end system sending packets to the router and then, it identifies which end systems are sending more than a fair share of traffic received by the router. By conditioning a flag in the packets coming from the identified end systems, the router generates feedback indicating that the identified end systems are contributing to the overload condition in the router and that they should decrease their output.

Nowhere does Jain et al. disclose monitoring the traffic for a plurality of TCP connections or UDP associations through a given network path as required by independent claims 1, 13, 23 and 35 or monitoring traffic for each of a plurality of TCP connections or UDP associations through a given network path, as required by independent claims 7, 18, 29 and 41. Rather, Jain et al. only teach monitoring the traffic passing through a router sent by a plurality of end systems. Nowhere does Jain et al. disclose, teach or suggest monitoring the traffic for a plurality of TCP connections or UDP associations through a given network path or monitoring traffic for each of a plurality of TCP connections or UDP associations through a given network path. Nor do Firoiu et al., Qaddoura or Blasbalg disclose, teach or suggest these aspects of the present invention. Accordingly, it is submitted that the Jain et al. patent, the Firoiu et al. patent, the Qaddoura patent and the Blasbalg patent, whether taken singly or in combination, do not disclose, teach or suggest the subject matter set out in claims 1-10, 12 and 23-47.

As also noted above, claims 13-22 stand rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,205,120 to Packer et al. in view of the '801 and '128 patents. The Packer et al. patent lacks a teaching of monitoring the traffic for a plurality of TCP connections or UDP associations through a given network path as required by independent claim 13 or monitoring traffic for each of a plurality of TCP connections or UDP associations through a given network path, as required by independent claim 18. Nor do Jain et al. or Firoiu et al.

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teach this aspect of the present invention. Accordingly, it is submitted that the Packer et al. patent, the Jain et al. patent and the Firoiu et al. patent, whether taken singly or in combination, do not disclose, teach or suggest the subject matter set out in claims 13-22.

With this paper, claim 11 has been deleted and new claim 47 has been added. Support for the subject matter of claim 47 can be found in US 2002/0141341 A1 at paragraph 27. No new matter is involved. It is submitted that claim 47 also defines patentable invention.

Further with this amendment, claims 5, 27 and 39 have been amended to delete the limitation "sent using the particular network path"; claims 33 and 45 have been amended to delete "for the selected network path"; and claims 12, 34 and 46 have been amended to change "network paths" to --TCP connections or UDP associations--. No new matter is involved.

In view of the above remarks, applicants submit that claims 1-10 and 12-47 define patentably over the prior art. Early notification of allowable subject matter is respectfully requested.

Respectfully submitted,
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